

(Annonaceae) confirms it as the new larval food plant.

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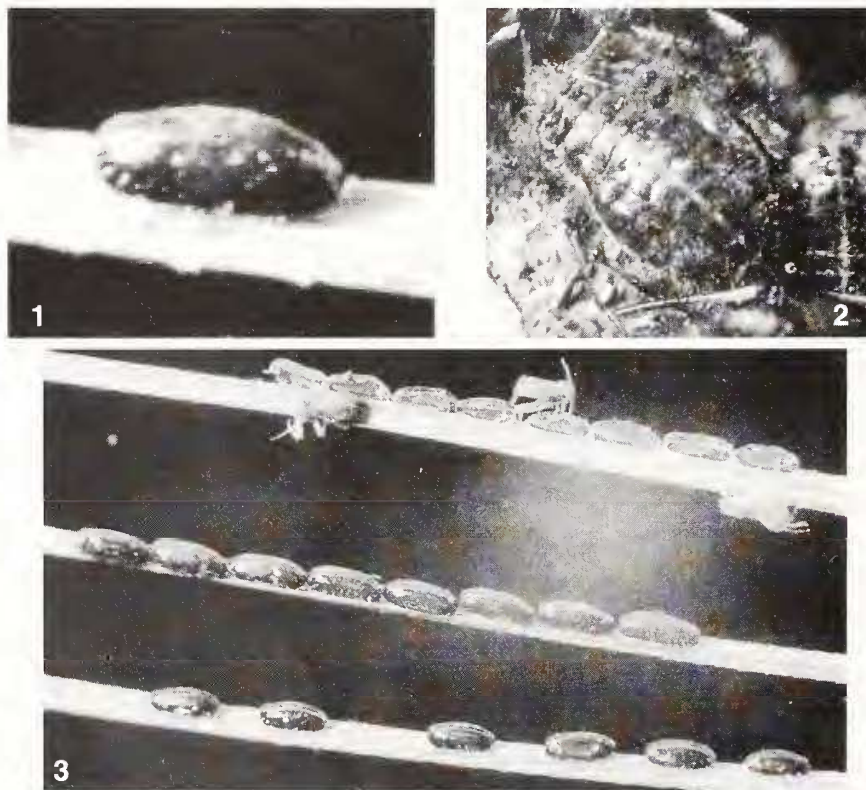
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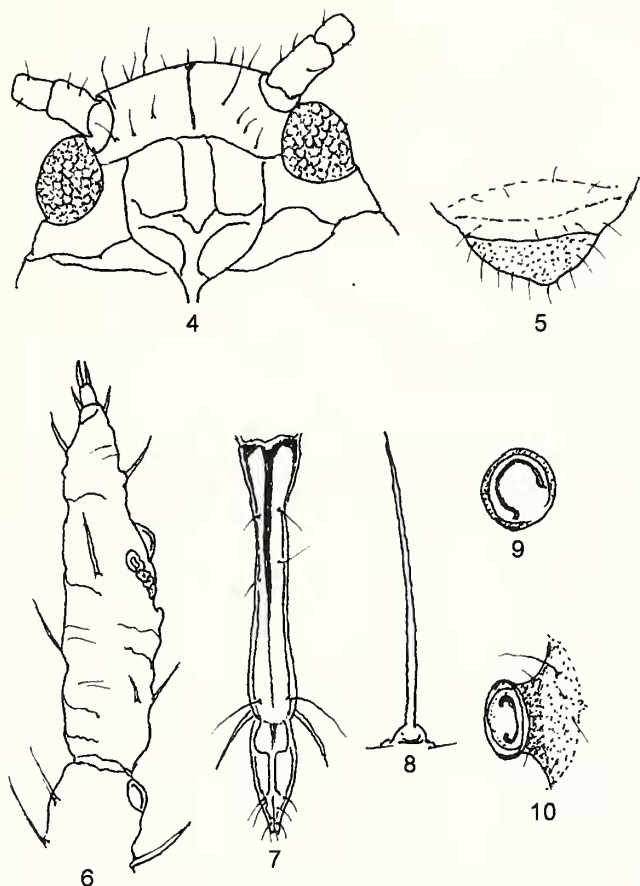
#### 19. DESCRIPTION OF HITHERTO UNKNOWN EGG AND 1<sup>ST</sup> INSTAR NYMPH OF *CINARA MACULIPES* HILLE RIS LAMBERS (APHIDOIDEA: LACHNIDAE) FROM SHIMLA, HIMACHAL PRADESH

Pine is infested by about 170 species of aphids, including more than 100 species of *Cinara* (Blackman and Eastop 1994). *Cinara maculipes* Hille Ris Lambers principally

feeds on *Pinus wallichiana*, Himalayan Blue Pine, abundant in the northwest Himalayan region of India. However, Ghosh (1982) studied one apterous viviparous female collected from



Figs 1-3: 1. Egg of *Cinara maculipes*; 2. Apterous viviparous female; 3. Newly hatched 1st instar nymph and eggs on pine needles



Figs 4-10: 4. Head; 5. Cauda;  
6. Antennal segment IV and part of III; 7. URS (IV+V);  
8. Hair on head; 9. Dorsal view of siphunculus;  
10. Lateral view of siphunculus

*Pinus patula*, Mexican Weeping Pine – an exotic to India.

Detailed descriptions of apterous and alate viviparous female, alate male and 2<sup>nd</sup> instar apterous nymph are available in literature (Hille Ris Lambers 1966; David *et al.* 1969; Ghosh 1982). *Cinara maculipes* is distributed in Himachal Pradesh, Jammu and Kashmir, and in Pakistan (Ghosh 1986). So far, eggs and 1<sup>st</sup> instar nymphs were unknown from this region.

During January 2002, several thick colonies of *Cinara maculipes* (Fig. 2) were noticed feeding among needles and young shoots of Himalayan Blue Pine (local name: Kail) in and around Conifer Campus of Himalayan Forest Research Institute (HFRI), Shimla. In this communication, hitherto unknown eggs and the 1<sup>st</sup> instar nymphs (Fig. 3) are described.

**Material Examined:** 65 eggs from pine needles, ten 1<sup>st</sup> instar nymphs, nine apterous viviparous females and two alate viviparous females (in permanent microscopic slides: whole mount), host: *Pinus wallichiana*, locality: Conifer Campus, HFRI, Shimla, Coll.: S. Chakrabarti, 8.i.2002.

**Egg:** Elliptical, shiny black, and tough. Longitudinal

narrow furrow along the mid dorsal surface of the egg. Length  $1.6 \pm 0.14$  mm, width  $0.65 \pm 0.095$  mm. Eggs laid on the pine needle, serially glued on the upper surface at an average of  $6.73 \pm 1.09$  eggs per needle. Maximum eggs laid per needle are 9 and minimum 5. Egg surface is often covered with minute white waxy particles (Fig. 1).

**First instar apterous nymph:** Oval, pale yellowish, legs slightly brown, rostrum darker. Body  $1.64 \pm 0.13$  mm long, width  $0.68 \pm 0.09$  mm at widest area of abdomen. Eyes multifaceted. Length of head (Fig. 4) across eyes 0.6 mm, bears 26 dorsal hairs, short hair  $0.029 \pm 0.01$  mm, long hair (Fig. 8)  $0.06 \pm 0.018$  mm. Antennae 4 segmented, yellowish, 0.74 mm long, 0.45 x body. Antennal hairs on segment III slender, hyaline, acuminate, 0.12x basal diameter of segment III. One prominent rhinaria apically on antennal segment III. Processus terminalis (Fig. 6) 0.17 mm long, spindle shaped, bears 2 apical and 8 other hairs, having one prominent rhinaria and 6 semicircular conjugant plates. Number of hairs on segments I, II, and III; 5, 4 and 30 respectively. Rostrum  $1.35 \pm 0.09$  mm long, slender, acuminate, reaches caudal tip, ultimate rostral segment (URS) distinctly divided into segments IV and V. URS darker,  $0.23 \pm 0.06$  mm long, bears 8 hairs each, on segment IV and V (Fig. 7). Legs stout, profusely hairy, length of leg I, II, and III, are 1.53 mm, 1.48 mm, and 1.86 mm respectively. Tarsal claws  $0.059 \pm 0.02$  mm long, paired, dark brown, sickle shaped. Length of hind tarsus, 0.284 mm. Dorsal hairs on tibia larger than lateral and ventral hairs, except for hind tibia where most hairs long. Length of long hairs 0.099 to 0.132 mm and short hairs 0.029 to 0.049 mm. Abdominal tergites faint but distinguishable, hairy, pigmented spots or muskelpatten semicircular to irregularly square,  $0.028 \pm 0.06$  mm, present laterally. Siphunculus circular with a chitinized rim inside (Fig. 9), slightly elevated on small sparsely hairy, pigmented cone (Fig. 10), diameter  $0.053 \pm 0.09$  mm. Cauda small, dusky, crescent shaped (Fig. 5), length 0.083 mm, width 0.2 mm, bears  $0.071 \pm 0.016$  mm long 8-10 hairs.

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20. A NEW RECORD OF THE CORAL *PAVONA VENOSA* (EHRENBERG, 1834)  
(SCLERACTINIA, AGARICIIDAE) FROM ANAIPAR ISLAND,  
GULF OF MANNAR BIOSPHERE RESERVE

A total of 208 species under 15 families and 60 genera of Scleractinian corals are reported from India (Venkataraman *et al.* 2003). According to a recent revision, among the four major zones of coral reefs of India, Andaman and Nicobar Islands are the most diverse in coral species (177 forms). Lakshadweep Archipelago ranks second (91 forms) and Gulf of Mannar Biosphere Reserve (GoMBR) ranks third (82 forms) in coral species diversity. The pioneer workers on the Gulf of Mannar (Thurston 1890; Brook 1893; Bernard 1897, 1905; Pillai 1967a, b, c) reported the richness of coral species diversity in this region and described the area as one of the hotspots for marine diversity. Although studies have been conducted on the coral reefs of GoMBR, information about the species diversity is still incomplete. The present report deals with the new record of *Pavona venosa* (Ehrenberg 1834) (Scleractinia: Agariciidae) from Anaipar Island, Gulf of Mannar Biosphere Reserve.

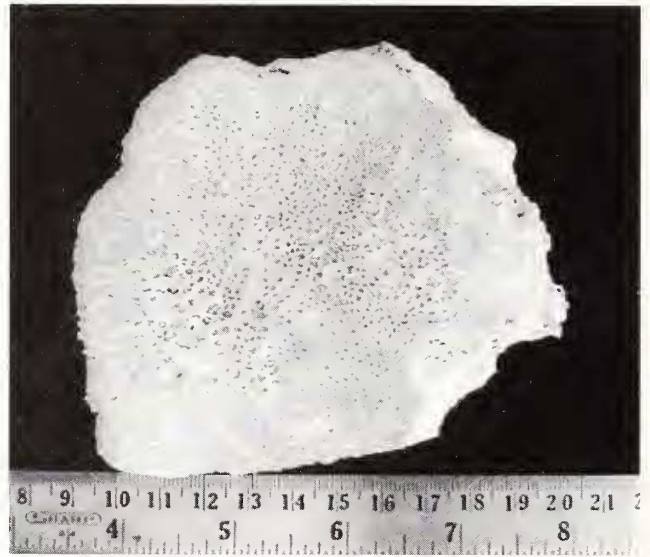


Fig. 1: *Pavona venosa* (Ehrenberg, 1834)



Fig. 2: Corallites of *Pavona venosa*

### Description

Phylum: Cnidaria  
Class: Anthozoa  
Subclass: Zoantharia de Blainville, 1830  
Order: Scleractinia Bourne, 1905  
Family: Agariciidae Gray, 1847  
Genus: *Pavona*

The Family Agariciidae includes six extant hermatypic genera – *Agaricia*, *Coeloseris*, *Gardineroseris*, *Leptoseris*, *Pachyseris* and *Pavona* – of which five genera, except *Agaricia*, are reported from India. Most of the genera are colonial. Colonies are massive, laminar or foliaceous. Corallites are immersed with poorly defined walls formed by thickening of the septo-costae. Septa seldom fuse and are continuous between adjacent corallite centres. Species of Family Agariciidae are most similar to those of Family Siderastreidae (Veron 2000).